

ABSTRACT

The present invention is a digital headend system for communicating a plurality of video packets, data packets, voice packets, and control packets. The system includes a buffering module, a re-packetization module, and a synchronization module. The buffering module receives the plurality of video packets, data packets, voice packets, control packets or any combination of packets. Preferably, the buffering module generates a destination address which identifies a particular re-packetization module. The identified re-packetization module is in communication with the buffering module. The first re-packetization module combines the plurality of video packets, data packets, voice packets, control packets or any combination thereof. The synchronizing module receives the re-packetization output and generates a synchronous output stream having the plurality of video packets, data packets, voice packets, control packets or any combination thereof. Preferably, the synchronous output stream is comprised of MPEG transport packets.

The present invention also provides a method for communicating the plurality of video packet, data packet, voice packet, control packets, or any combination thereof. The method provides for receiving the plurality of video, data, voice, control packets or any combination thereof. The method then proceeds to communicate the plurality of video packets, data packets, voice packets, control packets, or any combination thereof across a shared bus. The plurality of video packets, data packets, voice packets, control packets or any combination thereof which are communicated across said shared bus are managed by a processor resident on the re-packetization module.